

**GOVERNMENT OF INDIA
POWER
LOK SABHA**

UNSTARRED QUESTION NO:3292
ANSWERED ON:07.12.2007
POLLUTION BY NTPC POWER PLANTS
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Will the Minister of POWER be pleased to state:

- (a) whether an International organization has identified that the National Thermal Power Corporation (NTPC) is the third most pollution making organization in the world;
- (b) if so, the details thereof; and
- (c) the steps taken by the Government in this regard?

Answer

THE MINISTER OF POWER(SHRI SUSHILKUMAR SHINDE)

(a) & (b) : It has been recently reported in some newspapers that a Washington based organization namely, Center for Global Development, has ranked NTPC Ltd. as the third most polluting power firm in the world. However, the data base on which this conclusion is based, has not been validated or authenticated.

(c) : As per the United Nations Human Development Report of 2007-08, the per capita Carbon dioxide (CO₂) emission in India is 1.2 tonnes/year as against World average of 4.5 tonnes/year in the year 2004. Another publication of International Energy Agency, 'Key World Energy Statistics' – 2007, has estimated that per capita CO₂ emission in India at 1.05 tones is amongst the lowest in the world. In comparison, per capita carbon emission by USA has been 19.61 tonnes and that of China has been 3.88 tonnes. However, Government have taken the following steps for development of clean and efficient energy sources:

Enactment of Energy Conservation Act, 2001 and establishment of the Bureau of Energy Efficiency.

Enactment of Electricity Act, 2003, which stipulates that distribution companies must buy part of their electricity purchases from renewable sources.

Launching of Energy labeling programme for major energy consuming equipment and Energy Conservation Building Code.

Promotion of Super Critical Units for thermal generation.

Priority to development of hydro potential in the country and launching hydro power initiative of 50,000 MW in 2003.

Participation in Clean Development Mechanism (CDM) programme and Carbon Sequestration Leadership Forum (CSLF).

Partnership in the Future Gen Project of the United States to develop an emission free coal fired power plant.

NTPC Ltd. has also undertaken the following steps for emission reductions in CO₂:

1. Massive afforestation has been undertaken at all NTPC Ltd. sites, which acts as sink for CO₂. Till date, 1.8 crore trees have been planted.
2. NTPC Ltd. is adopting super critical technology in its upcoming power projects with unit sizes of 660 MW and above. Super critical units have higher efficiency (about 2.5%) and consequently result in lower CO₂ emissions (about 0.5-1 million tonnes per annum for 3x660 MW project). Even in sub-critical units, the reheat temperature of steam is being increased to improve efficiency and consequently reduce CO₂ emissions (about 10,000-15,000 tonnes per annum for 500 MW unit).
3. NTPC Ltd. has diversified into hydro sector and several hydro power projects are under implementation/various stages of development. Implementation of hydro projects will reduce average carbon intensity of the company.
4. NTPC Ltd. is also venturing into the area of renewable energy sources. NTPC Ltd. has formulated its business plan of capacity addition of about 1,000 MW through renewable sources by 2017.
5. NTPC Ltd. is undertaking Renovation and Modernization (R&M) of old power plants to improve their efficiency and to reduce carbon intensity.

